

Chapter 6: Solving Systems

Solving by Substitution 6.2 Day #2 WS

Period: _____ Date: _____

Solve the following systems by substitution.

- ✓ Remember that it is easiest to solve for variables without a coefficient (i.e. 1 or -1).
- ✓ Substitute (replace) into the other equation, so that only one variable is left.
- ✓ Do not forget to find both values and put your answer in the form of an ordered pair (x, y) .

1.
$$\begin{aligned} y &= 6x - 11 \\ -2x - 3y &= -7 \end{aligned}$$

2.
$$\begin{aligned} 2x - 3y &= -1 \\ y &= x - 1 \end{aligned}$$

3.
$$\begin{aligned} y &= -3x + 5 \\ 5x - 4y &= -3 \end{aligned}$$

4.
$$\begin{aligned} -3x - 3y &= 3 \\ y &= -5x - 17 \end{aligned}$$

5.
$$\begin{aligned} -4x + y &= 6 \\ -5x - y &= 21 \end{aligned}$$

6.
$$\begin{aligned} -7x - 2y &= -13 \\ x - 2y &= 11 \end{aligned}$$

7.
$$\begin{aligned} -5x + y &= -2 \\ -3x + 6y &= -12 \end{aligned}$$

8.
$$\begin{aligned} -3x + 3y &= 4 \\ -2x + y &= 3 \end{aligned}$$

"What Disney movie is about a stupid boyfriend?"

Solve the systems of equations using the substitution method.

The answer to each problem will match a letter that will allow you to figure out the joke.

1. $2x + 3y = 10$
 $y = -x + 2$

U. (1,2)

O. (-5,0)

2. $x = 4y - 7$
 $3x = 2y - 1$

B. (7,21)

W. (0,0)

3. $4x - y = 7$
 $y = 3x$

D. (-2,-3)

A. (-1,1)

4. $5y - 6 = x$
 $y = -x$

Y. (-1,4)

E. (-4,6)

5. $x - 2y = 1$
 $y = x + 2$

M. (-5,-3)

I. (7,3)

6. $x = -2y + 6$
 $3x - 18 = -6y$

U. No Solution

N. (-4,5)

7. $6x - 2y = 7$
 $y - 3x = -6$

S. (-3,2)

B. All real numbers on
the line: $y = \frac{-1}{2}x + 3$

8. $x - 7y = 19$
 $5x = -2y - 16$

V. (2,2)

F. (-3,13)

8 2 5 6 3 1 4 7